Magnum Fitness Systems

Maintenance Manual for UB300 and UB300H Versions 1.1 – 1.3

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CUSTOMIZING YOUR UB300 USING THE SET UP MODE

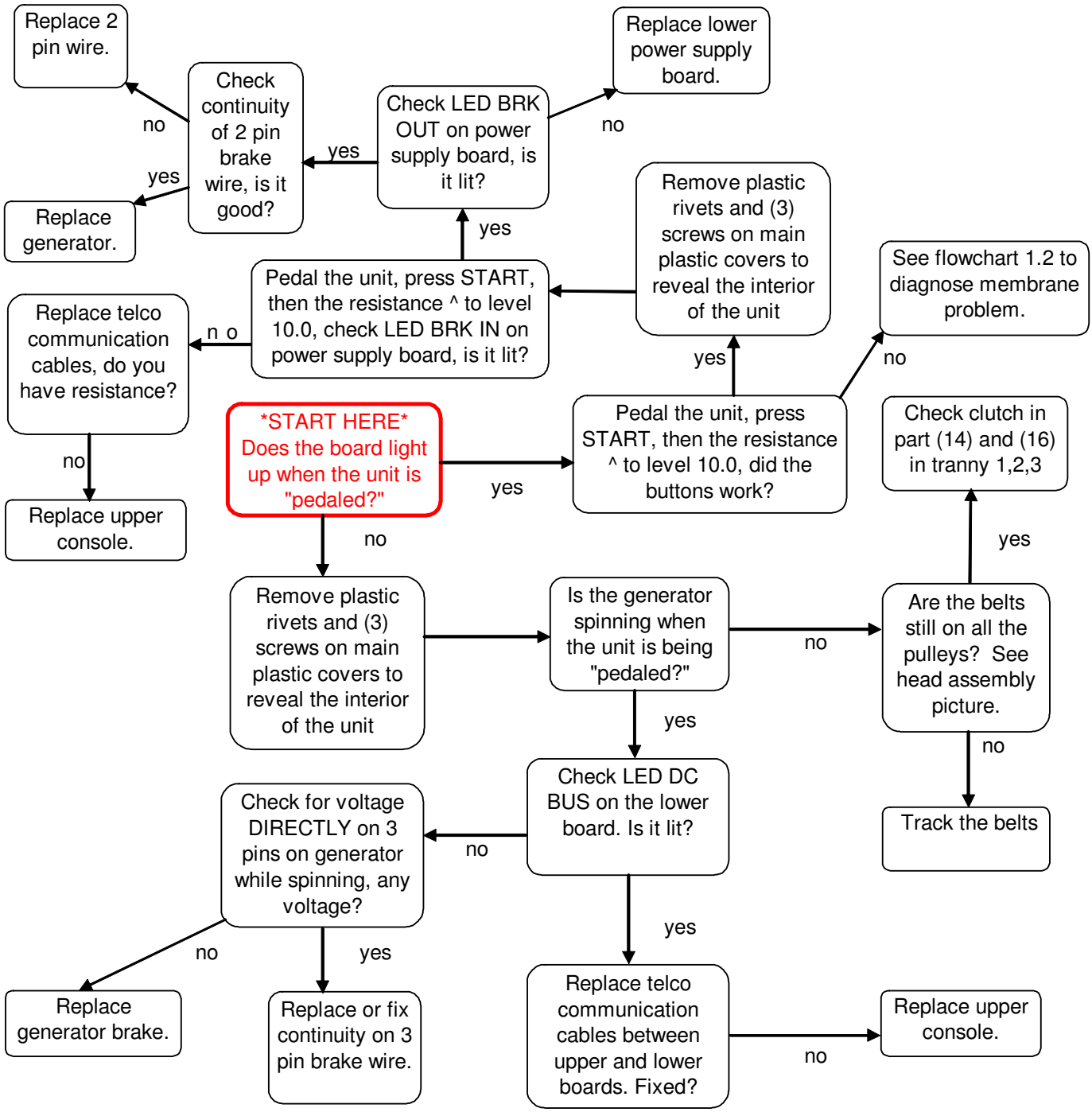
Follow the steps below to enter the set up mode, there is a brief description of the function of each setting and how to customize it for your needs.

- Start cranking the unit to display the welcome screen (you will need to continue to crank to keep the board lit during the process)
- press and hold both the ***RESET*** and the ***ENTER*** keys until the display changes to read the first setting below
- use the ***RESISTANCE HIGHER*** and ***RESISTANCE LOWER*** keys to adjust the settings in each parameter choice. When you are satisfied with a particular setting use the ***ENTER*** key and the new setting will be used and will move to the next setting, in other words…
  - ***ENTER*** moves you to the next setting
  - ***HIGHER / LOWER*** changes the choices in a particular setting

Setting	**Default**	**Summary and features**
Version	xxx	This is the current software version that is in use, this setting is for information only
Units	US	Use the resistance higher/lower key to select between US and Metric
Reduct Ratio	5.05	Used to determine the correct ratio for rpms, do not adjust
Mode	Medical	Use the resistance higher/lower key to select between Fitness, Medical, Trainer Fitness: basic mode of operation Medical: same as fitness but will allow the user to change resistance levels in .1 increments and will display METS in the scrolling screen Trainer: same as Medical but includes four additional interval training programs
Unit type	Upper	Lower is used for everything but the UBE series of equipment where Upper should be selected using the resistance higher key
Lvl 20 Brake	400	this is the actual resistance that the brake will exert when the display reads level 20 resistance, the range is 0-1023, the higher the number the greater the resistance
Start Level	0.0	this is the starting level that comes up automatically when you select quickstart, from here you can manually increase or decrease the resistance throughout the workout
ABS Max Brake	750	This is the ABSolute maximum braking that the program is allowed to exert during any given program, range is 0-1023
Heart Rate	beat to beat	do not adjust
HR type	No Contact	selectable between Use Contact and No Contact, if your unit has contact HR select Use contact, if you do not have the contact HR option select No Contact
Acceleration	20	this is an arbitrary number to how fast the program reacts to the resistance changes * example: at default settings it takes 5 seconds to feel the maximum resistance change when going from 0 to 10 resistance, if we double the acceleration to 40 it should take half the time or 2.5 seconds
Comm	Disabled	Use the higher / lower resistance key to select between the different options
UHRS	xxx	this is the amount of hours used since this number was last reset, to reset press CLEAR
THRS	xxx	this is the amount of hours Total on the bike and is not resettable.

Once you hit ENTER this last time it should go back to the welcome screen and all your changes will be saved.

Flowchart 1.1 No Resistance / No Power to display


START HERE Does the board light up when the unit is "pedaled?"
no
yes
Pedal the unit, press START, then the resistance ^ to level 10.0, did the buttons work?
yes
no
See flowchart 1.2 to diagnose membrane problem.
Check clutch in part (14) and (16) in tranny 1,2,3
yes
Are the belts still on all the pulleys? See head assembly picture.
no
Track the belts
no
Is the generator spinning when the unit is being "pedaled?"
yes
Remove plastic rivets and (3) screws on main plastic covers to reveal the interior of the unit
Check LED DC BUS on the lower board. Is it lit?
yes
no
Replace telco communication cables between upper and lower boards. Fixed?
no
Replace upper console.
Check for voltage DIRECTLY on 3 pins on generator while spinning, any voltage?
no
yes
Replace generator brake.
Replace or fix continuity on 3 pin brake wire.
Replace telco communication cables, do you have resistance?
no
Replace upper console.
Pedal the unit, press START, then the resistance ^ to level 10.0, check LED BRK IN on power supply board, is it lit?
yes
Remove plastic rivets and (3) screws on main plastic covers to reveal the interior of the unit
yes
Check LED BRK OUT on power supply board, is it lit?
no
Replace lower power supply board.
yes
Check continuity of 2 pin brake wire, is it good?
no
Replace 2 pin wire.
yes
Replace generator.

Flowchart 1.2 Membrane Switches not functioning

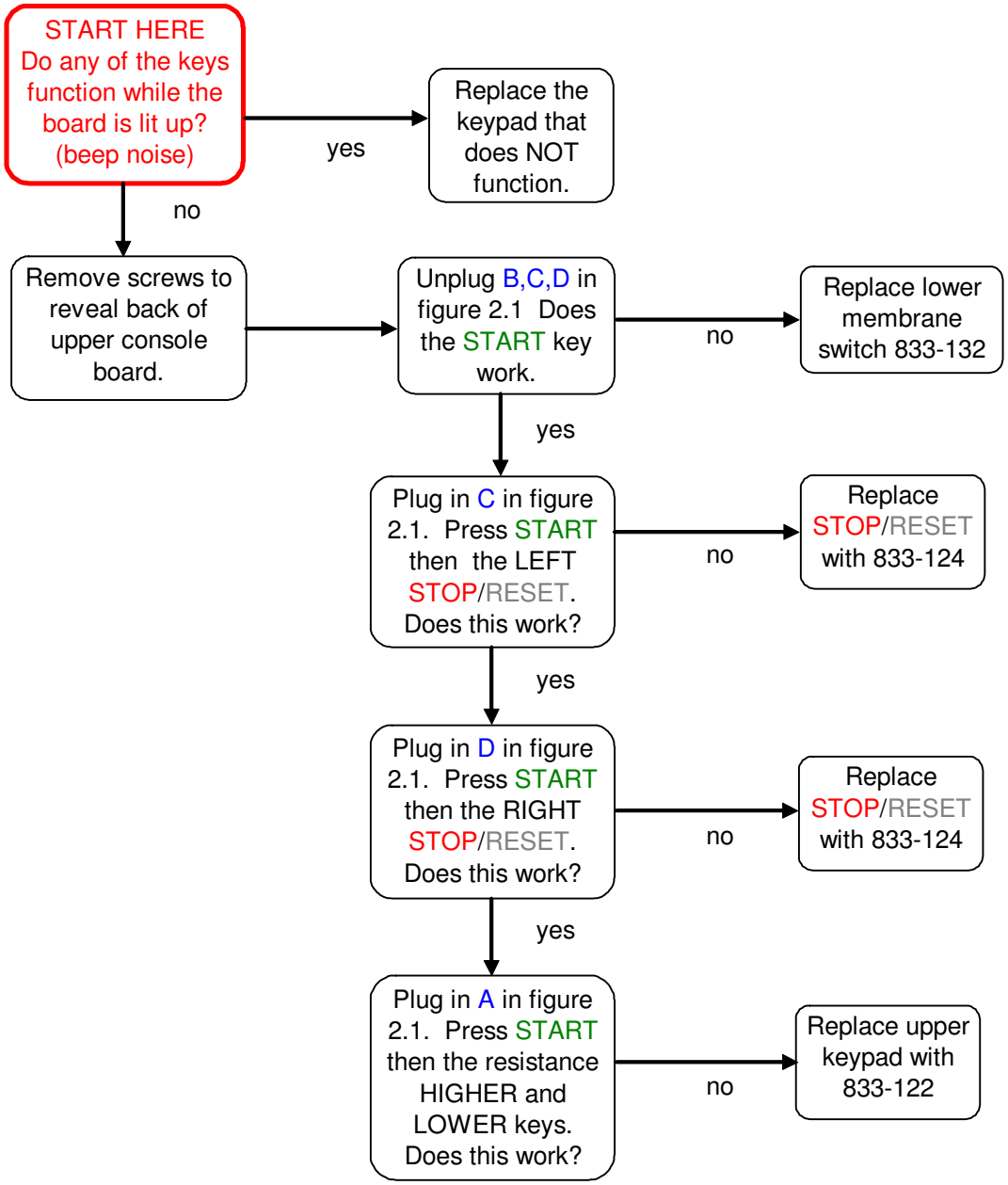
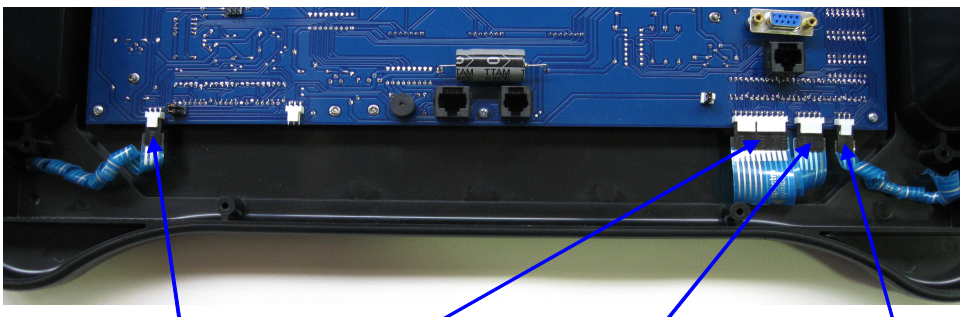
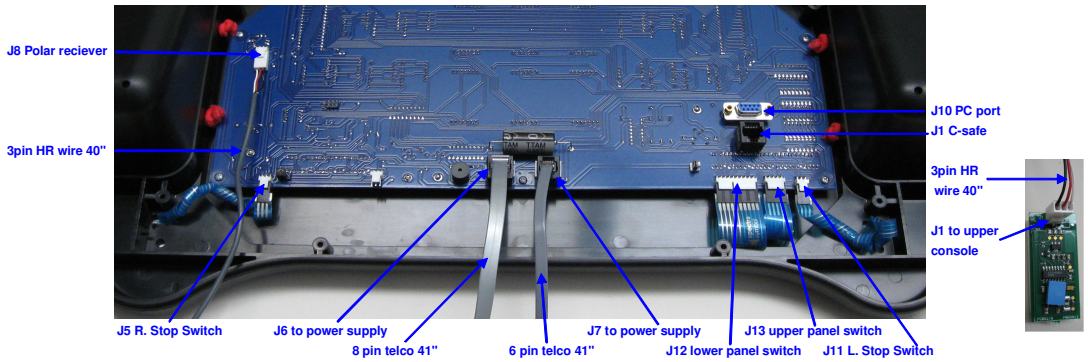

START HERE
Do any of the keys function while the board is lit up? (beep noise)
yes
Replace the keypad that does NOT function.
no
Remove screws to reveal back of upper console board.
Unplug B,C,D in figure 2.1 Does the START key work.
no
Replace lower membrane switch 833-132
yes
Plug in C in figure 2.1. Press START then the LEFT STOP/RESET. Does this work?
no
Replace STOP/RESET with 833-124
yes
Plug in D in figure 2.1. Press START then the RIGHT STOP/RESET. Does this work?
no
Replace STOP/RESET with 833-124
yes
Plug in A in figure 2.1. Press START then the resistance HIGHER and LOWER keys. Does this work?
no
Replace upper keypad with 833-122

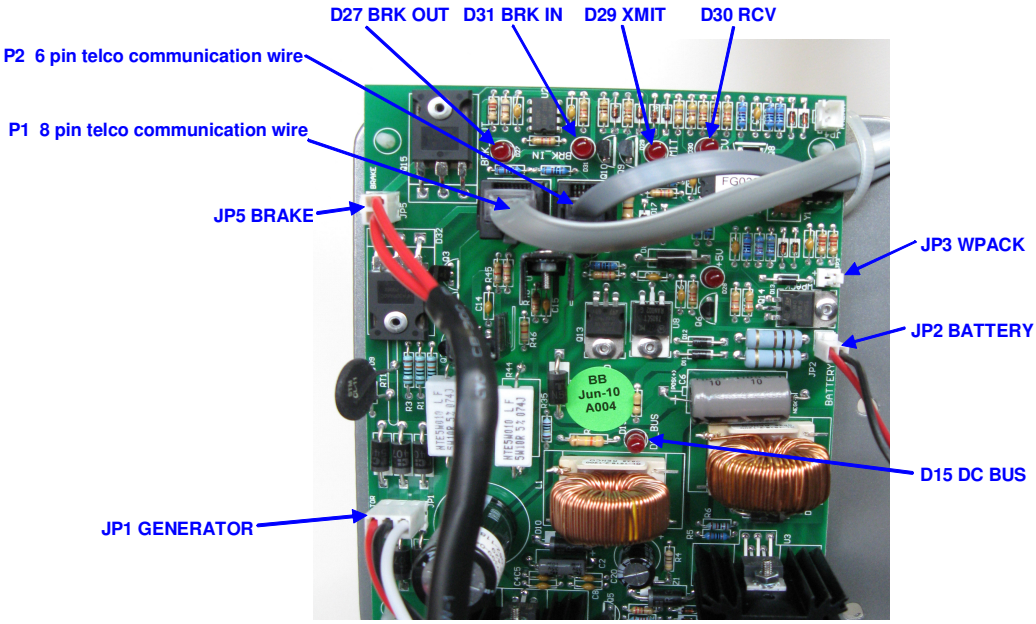
Figure 2.1



Electronic connections and LED locations



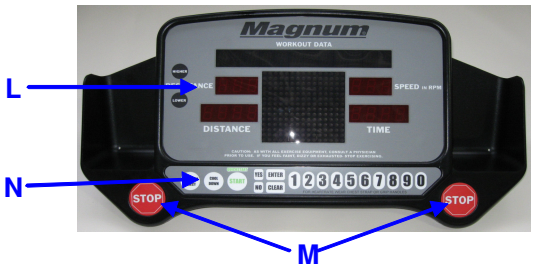
J1- located on Polar® wireless heart rate board
J8- wire plugs from J1 on Polar® wireless heart rate board
J5 R. Stop Switch- plug for the right stop switch located on the front of the upper console
J4 Handgrip- plug for wire coming from the Polar® contact heart rate board (only on contact HR models)
J6 to power supply- 8 pin telco communication wire plug from P1 on power supply board
J7 to power supply- 6 pin telco communication wire plug fromP2 on power supply board
J2 Kill Switch- used only on some treadmill models for the emergency stop tether
J12 Lower panel switch- plug for the lower membrane switch on the front of the upper console
J13 Upper Panel Switch- plug for the upper membrane switch on the front of the upper console
J11 L. Stop Switch- plug for the left stop switch located on the front of the upper console

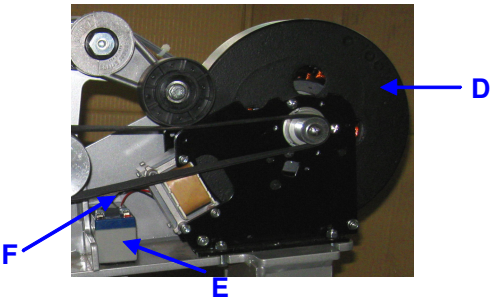


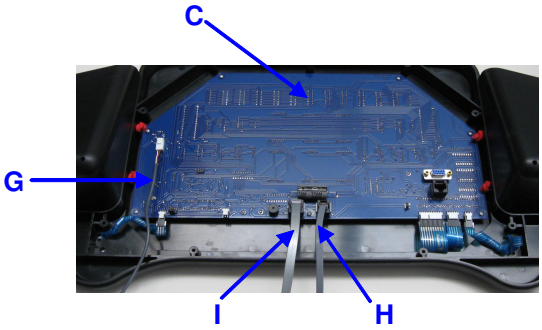
D27 BRK OUT- Will be lit when resistance is selected on the upper console. Light will be dim at low resistance then gradually get brighter as more resistance is selected.
D31 BRK IN- Will be lit when resistance is selected on the upper console.
D29 XMIT- This LED indicates that the PSB is sending information to the upper console, should be flashing.
D30 RCV- This LED indicates that the upper console is sending information to the PSB, should be flashing.
JP3 WPACK- This is a plug for the optional CS3 wall pack.
JP2 BATTERY- This is for the 12V battery.
D15 DC BUS- This LED indicates that it is receiving power from the generator.
JP1 GENERATOR- This is a 3 pin plug that goes directly to the generator, supplies power to the PSB and allows RPM to show on the upper console.
JP5 BRAKE- This is a 2 pin plug that goes to the magnetic coil for breaking (resistance.)
P1 8 pin telco communication wire- Supplies both power and communication to the upper console.
P2 6 pin telco communication wire- Supplies both power and communication to the upper console.

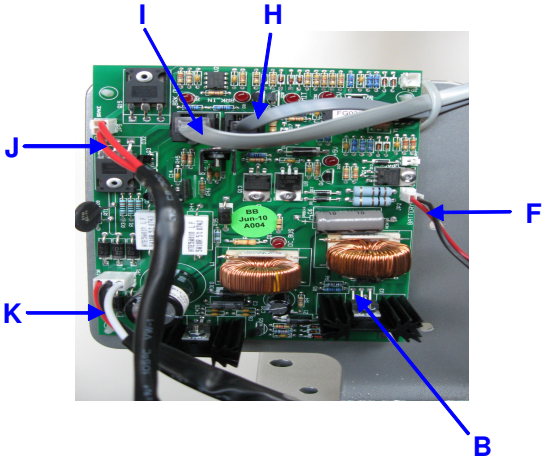
All Electronics Part Numbers

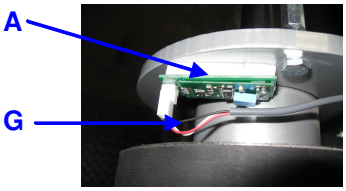
ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
A	1	833-280	Polar® wireless HR reciever board
B	1	833-429	Power supply board (version H15)
C	1	833-432	Single color upper console
D	1	833-339	Generator brake, direct drive ROHS
E	1	833-106	12V 1.2Ah lead acid battery
F	1	149-117	UB300 battery wire- 14"
G	1	149-118	UB300 3 pin Polar® board wire- 44"
H	1	149-119	UB300 telco communication wire, 6 pin- 41"
I	1	149-120	UB300 telco communication wire, 8 pin- 41"
J	1	149-121	UB300 2 pin brake wire- 11"
K	1	149-122	UB300 3 pin brake wire- 11"
L	1	833-122	Upper overlay/ membrane switch
M	2	833-124	STOP membrane switch
N	1	833-132	Lower membrane switch (Quickstart w/ numbers)





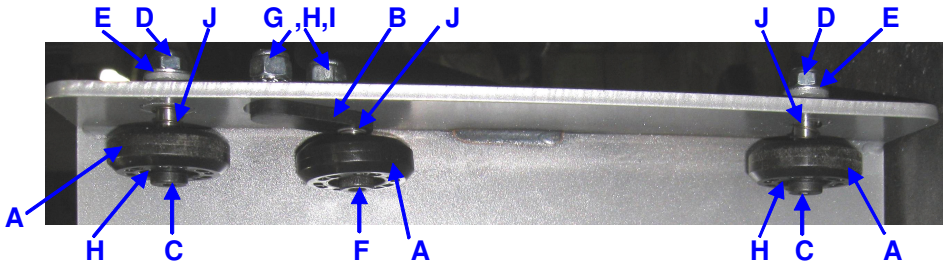


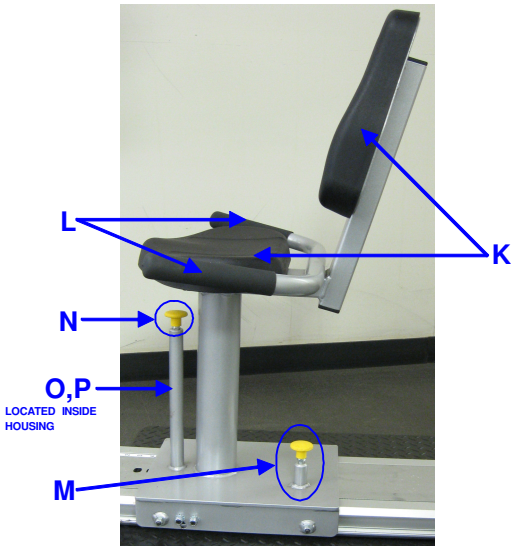


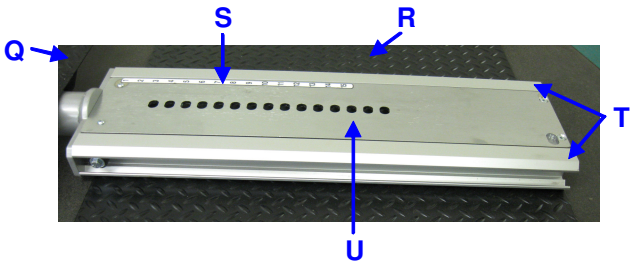


Seat assembly Part Numbers

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
A	6	833-508	Cardio seat wheel w/ bearing
B	2	750-023	cam tensioner
C	4	810-971	shoulder bolt 3/8 x 1 1/2"
D	4	817-405	5/16" tall lock nut
E	4	818-004	1/4" zinc washer
F	2	810-965	shoulder bolt 3/8 x 3/4"
G	4	817-406	3/8" tall lock nut
H	8	819-012	3/8" machine bushing
I	4	819-707	3/8" external tooth lock washer
J	6	852-807	spring (cut in half)
K	1	833-150	Seat pad (set)
L	2	858-321	grip 1.25"ID x 7" long
M	1	640-002	spring pin assembly w/ gold knob
N	1	852-207	gold knob
O	1	839-119	spring pin
P	1	852-801	spring 11/16" OD x 5" long
Q	1	501-684	small diamond plate
R	1	501-811	large diamond plate
S	1	854-056	number decal
T	2	833-104	aluminum seat track extrusion
U	1	839-067	chrome seat adjustment plate

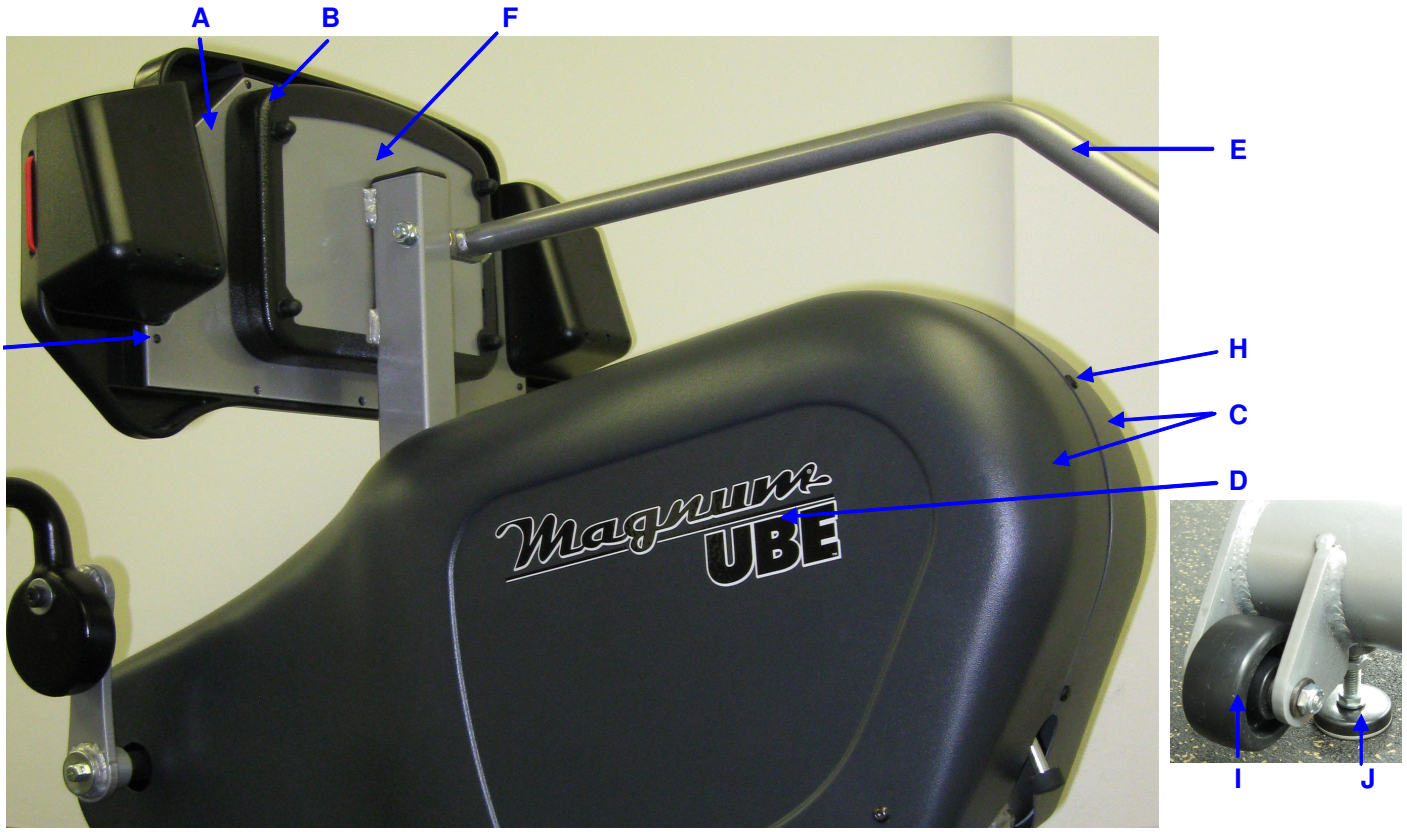




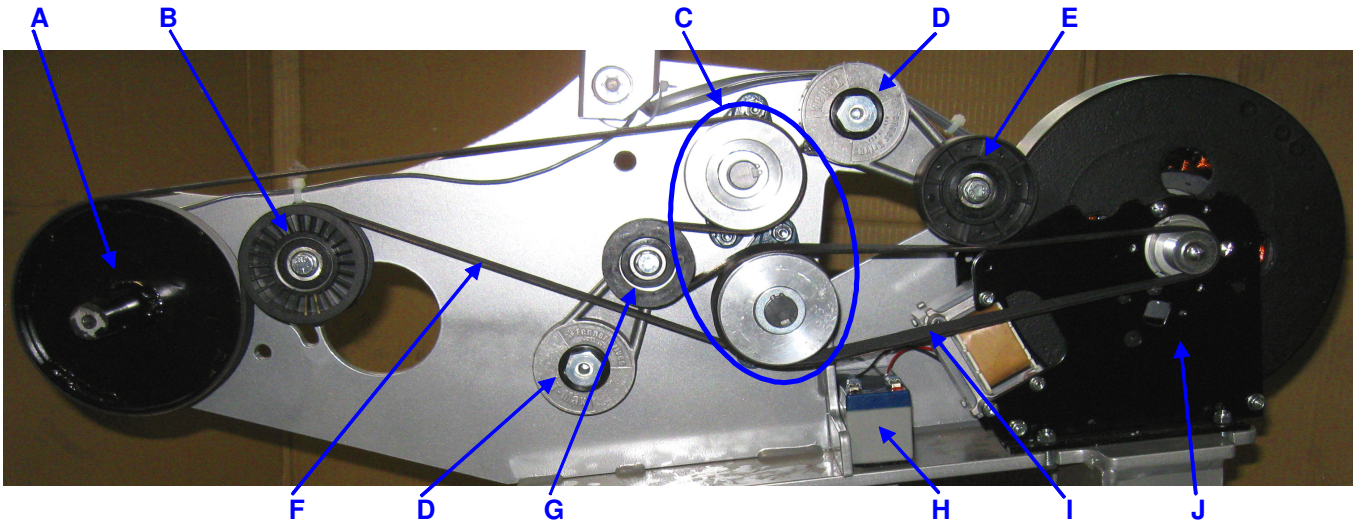


External component part numbers

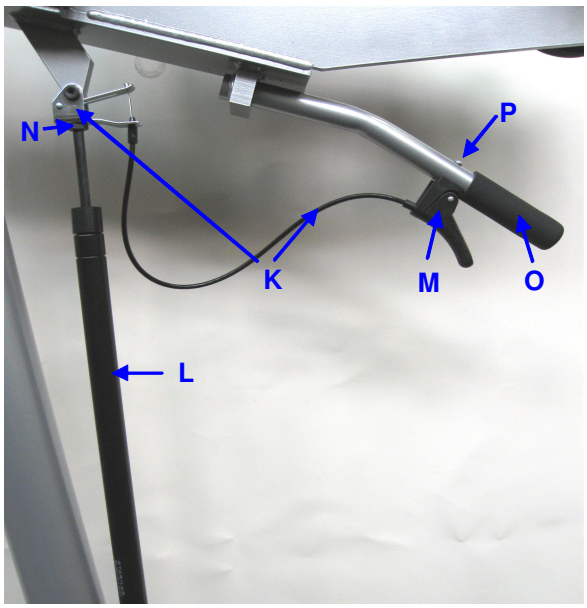
ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
A	1	500-001	steel console back plate
B	1	833-259	ABS trim ring
C	1	833-089	smoke gray UBE guard set
D	2	854-038	UBE decal
E	1	101-536	console support arm
F	1	101-535	pivoting console frame
G	9	810-089	#6 x 3/4" black zinc screw
H	10	833-127	1/4" black plastic rivet
I	1	009-642	moving wheel kit (2 wheels and hardware)
J	2	833-114	3/8-16 leveling foot



Head assembly part numbers

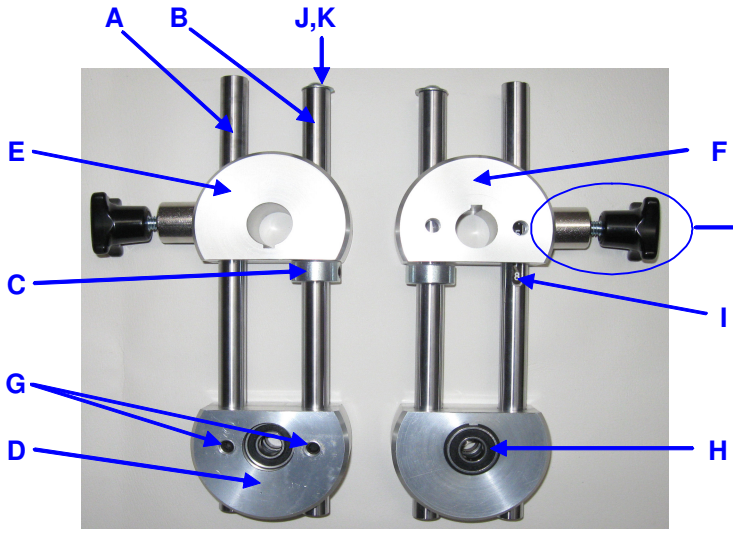


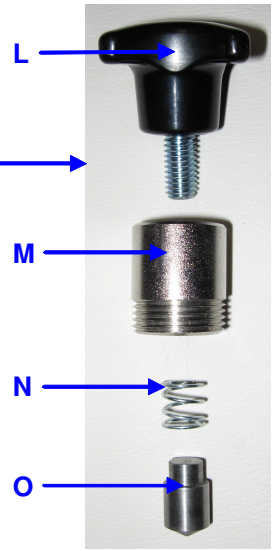
ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
A	1	101-652	User crank pulley
B	1	833-443	3.24" sided flat belt idler pulley w/ bushing
C	1	n/a	See tranny diagrams 1-3
D	2	833-527	belt tenisioner w/o pulley
E	1	833-440	2.91" convex belt ilder pulley w/ bushing
F	1	702-131	650J8 ribbed belt
G	1	833-442	2.35" sided flat belt idler pulley w/ bushing
H	1	833-106	12V 1.2Ah lead acid battery
I	1	702-129	285J8 ribbed belt
J	1	833-339	generator brake, direct drive ROHS
K	1	833-085	complete cable assembly
L	1	833-062	600N dual orifice shock
M	1	833-086	release lever
N	1	833-087	jam nut
O	1	858-321	hand grip
P	1	817-020	10-32 x 1 1/4" phillips pan head bolt

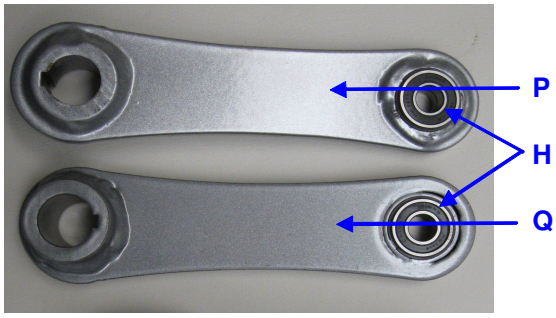


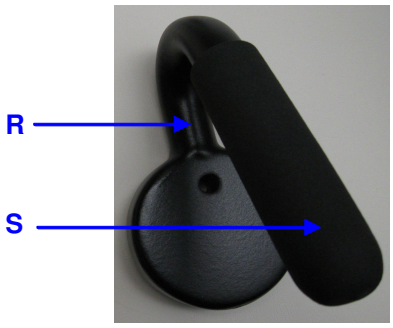
Handle part numbers, fixed and optional adjustable (H option)

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
A	2	200-499	5/8" indented shaft
B	2	200-561	5/8" shaft, drilled one end 1/4-20
C	2	852-610	5/8" set collar
D	2	200-472	aluminum handle bearing end
E	1	200-471	aluminum key toward handle
F	1	200-634	aluminum handle away from handle
G	4	815-504	set screw 3/8-16 x 5/16"
H	4	851-632	1/2" ID flange bearing
I	2	854-968	number decal
J	2	818-004	1/4" zinc washer
K	2	813-402	1/4-20 x 1/2" zinc button head bolt
L	2	833-515	3/8-16 star knob
M	2	200-502	star knob spring housing
N	2	833-513	spring
O	2	200-501	adjustable handle plunger
P	1	101-683	fixed handle key away from handle
Q	1	101-684	fixed handle key toward handle
R	2	833-149	plastisol dipped handle
S	2	858-320	grip for handle



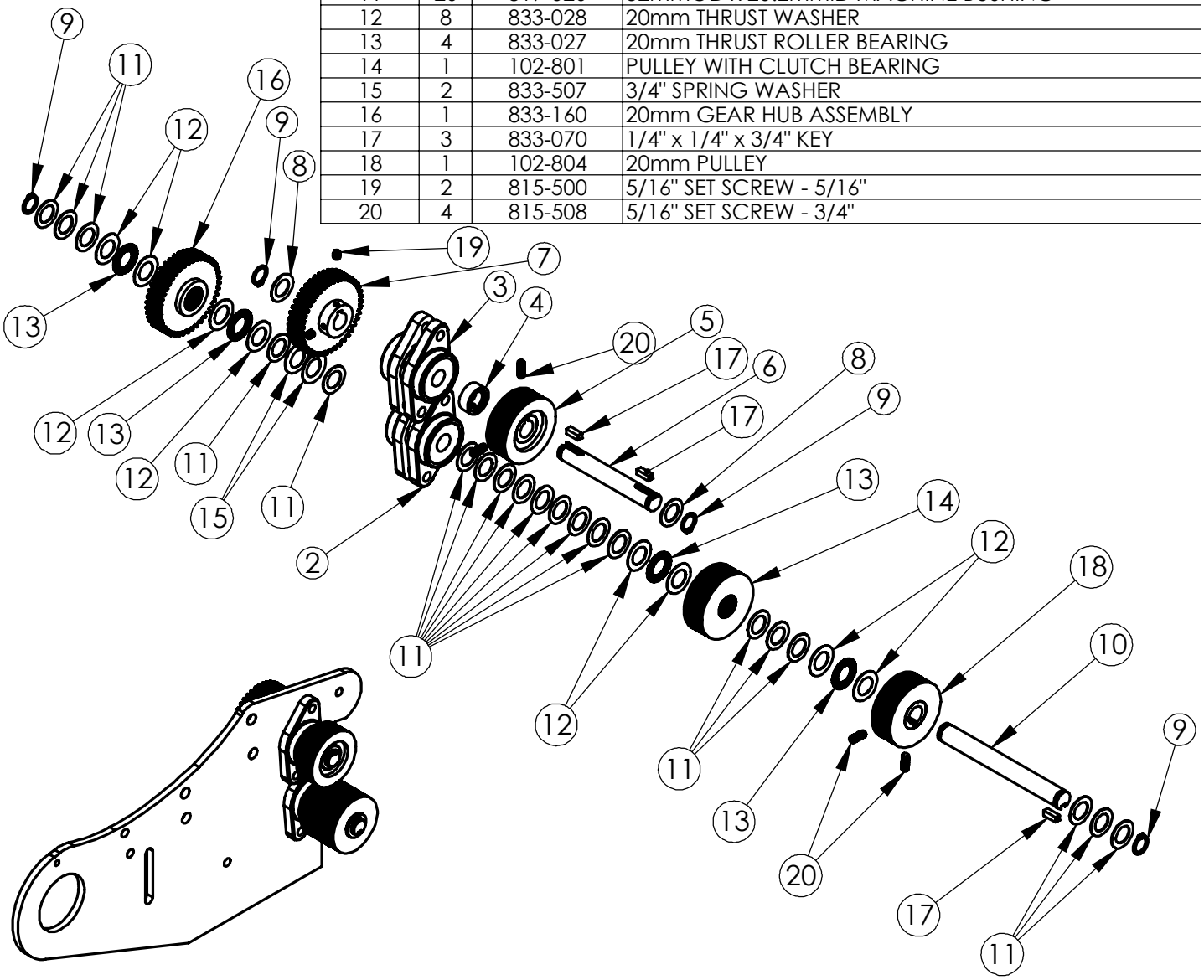




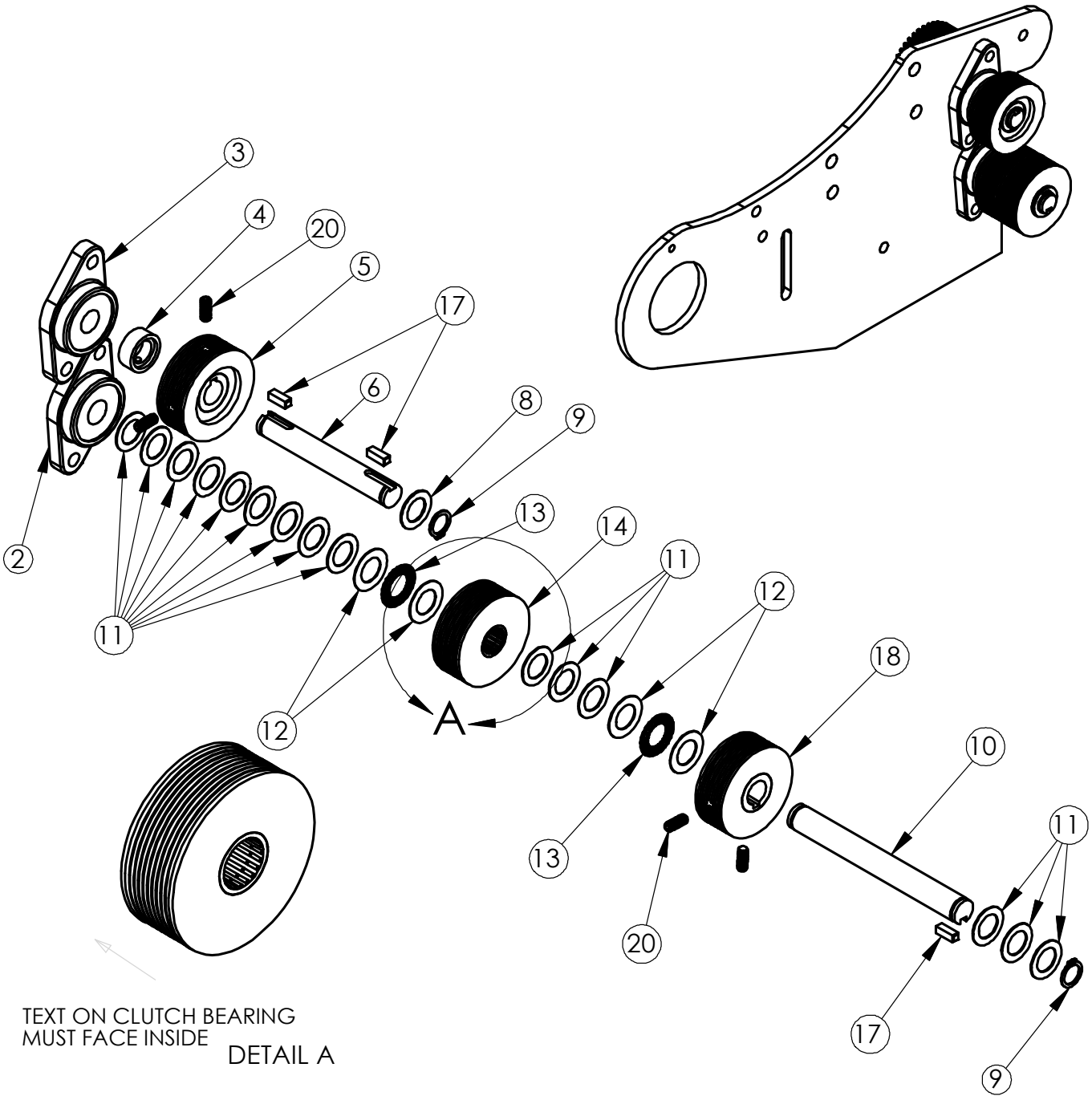


Tranny parts diagram 1

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	501-682	3/8" PLASMA
2	2	833-026	20mm FLANGE PILLOW BLOCK BEARING (REVERSED)
3	2	851-155	3/4" FLANGE PILLOW BLOCK BEARING (REVERSED)
4	1	851-156	LOCKING COLLAR
5	1	101-385	PULLEY
6	1	200-545	3/4"OD TGP - 5 3/8"
7	1	833-161	3/4" GEAR HUB ASSEMBLY
8	3	819-016	1 1/4"OD x 3/4"ID MACHINE BUSHING
9	4	819-315	3/4" EXTERNAL SNAP RING
10	1	200-538	20mm HARDENED SHAFT - 7 1/16"
11	20	819-020	32mmOD x 20.2mmID MACHINE BUSHING
12	8	833-028	20mm THRUST WASHER
13	4	833-027	20mm THRUST ROLLER BEARING
14	1	102-801	PULLEY WITH CLUTCH BEARING
15	2	833-507	3/4" SPRING WASHER
16	1	833-160	20mm GEAR HUB ASSEMBLY
17	3	833-070	1/4" x 1/4" x 3/4" KEY
18	1	102-804	20mm PULLEY
19	2	815-500	5/16" SET SCREW - 5/16"
20	4	815-508	5/16" SET SCREW - 3/4"



Tranny parts diagram 2



Tranny parts diagram 3